

N⁺ series

All-Black Solar Panels-54

410-430W

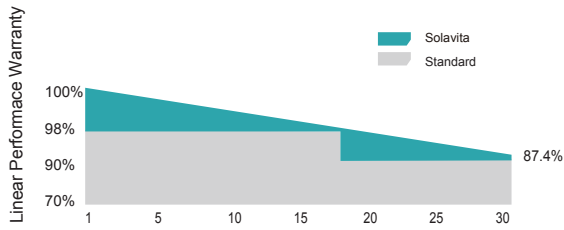
QUALITY SYSTEM

IEC 61215(2021), IEC 61730(2021)

ISO 9001:2015: Quality management systems

ISO 14001:2015: Environmental management systems

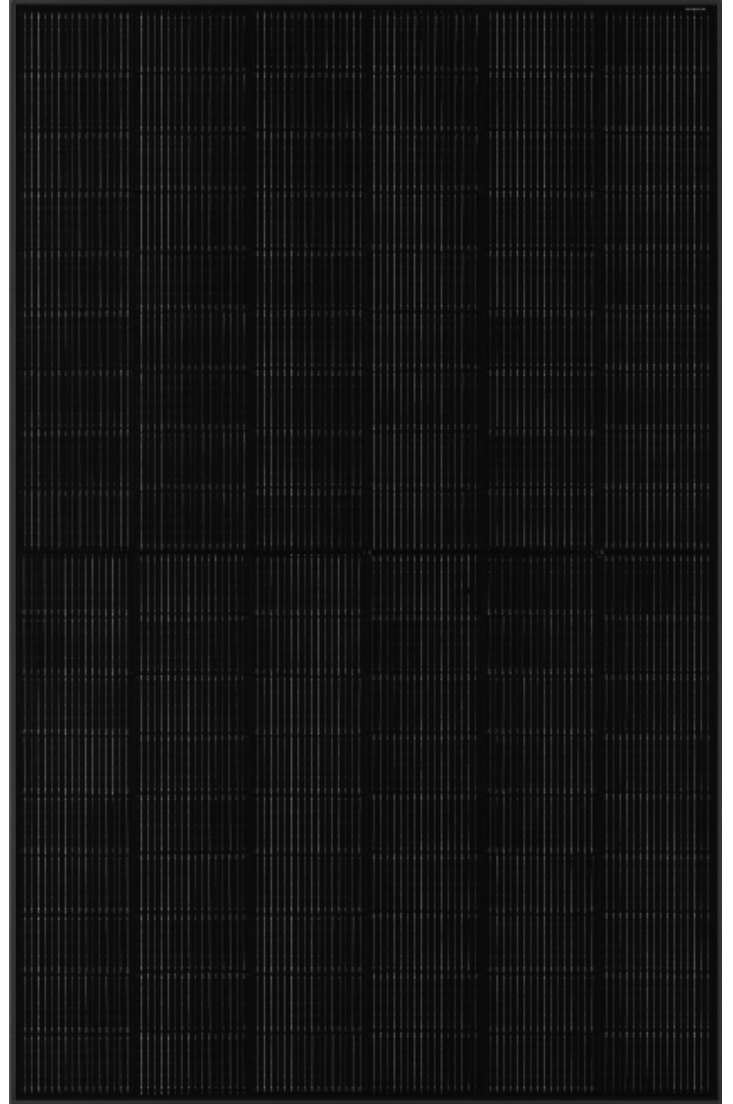
ISO 45001:2018: Occupational health and safety management systems



15 YEARS 15-year product warranty

30 YEARS 30-year linear power output warranty

0.4% year 2-30 power degradation



KEY FEATURES



Bifacial Energy Yield | N-type Silicon Wafer

Additional power generation from the backside of bifacial modules increases the overall energy yield



Better low irradiance response

Superior power generation under shading conditions



Improvement in power generation performance

TOPCon can achieve a power generation gain of up to 3%.
Reduced power temperature loss and excellent performance in high temperatures cost-effectiveness



Highly Anti PID

linear power warranty with first year $\leq 1\%$ degradation and an annual degradation rate of up to 0.4% after that.

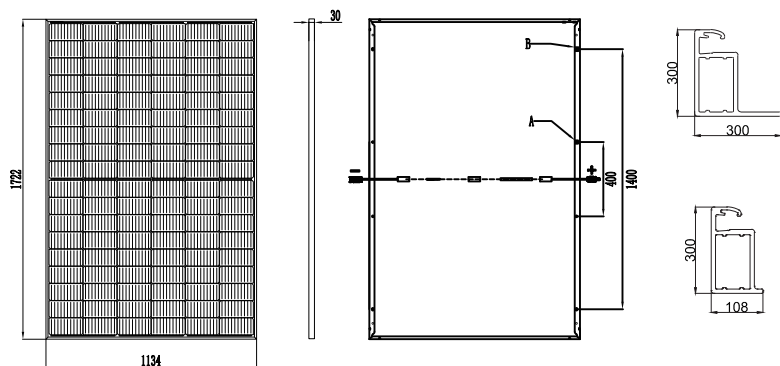


Mechanical load enhancement

Maximum wind load (2400Pa) / Maximum snow load (5400Pa)



Technical drawing



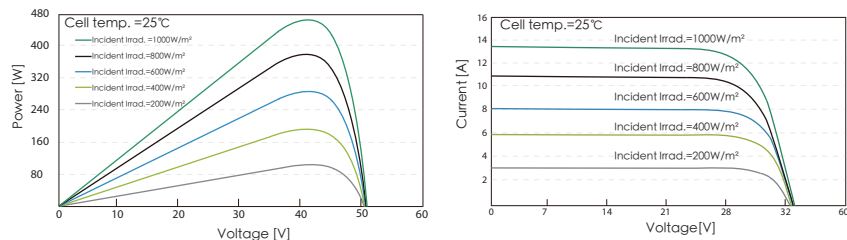
Mechanical Specifications

| | |
|-----------------------|--|
| Solar Cells | 182×91mm |
| Dimension | 1722 × 1134 × 30mm |
| Weight | 21.3kg |
| Front Glass | 2.0mm tempered Glass, high transparency |
| packing configuration | EVA/POE |
| Back Glass | 2.0mm heat-tempered glass |
| Frame | anodized aluminium alloy |
| Junction Box | IP68 / 3 diodes |
| Output Cables | 4mm ² / +450mm -250mm (Customized Length) |

Electrical Characteristics

| Module Type | 182THCD410-54 | 182THCD415-54 | 182THCD420-54 | 182THCD425-54 | 182THCD430-54 |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|
| | STC | STC | STC | STC | STC |
| Maximum Power[W] | 410 | 415 | 420 | 425 | 430 |
| Maximum Power Voltage[V] | 31.45 | 31.62 | 31.80 | 31.98 | 32.16 |
| Maximum Power Current[A] | 13.04 | 13.12 | 13.21 | 13.29 | 13.37 |
| Open circuit voltage[V] | 37.75 | 37.92 | 38.09 | 38.26 | 38.43 |
| Short Circuit Current[A] | 14.02 | 14.05 | 14.08 | 14.11 | 14.14 |
| Module Efficiency | 21.00% | 21.25% | 21.51% | 21.76% | 22.02% |
| Operating Temperature | -40℃~+85℃ | | | | |
| Maximum System Voltage | DC1000V/1500V | | | | |
| Maximum Series Fuse Rating | 30A | | | | |
| Power Tolerance[W] | 0~+5W | | | | |
| Voc Temperature Coefficient | -0.28%/℃ | | | | |
| Pmax Temperature Coefficient | -0.29%/℃ | | | | |
| Isc Temperature Coefficient | 0.04%/℃ | | | | |
| Nominal Operating Cell Temperature | 45±2℃ | | | | |

Characteristic



Level

| | |
|---------------------|----------|
| Fire Performance | C |
| Security Protection | Class II |

Packing Configuration

| | | |
|---------------------|--------------|-------|
| Pallet | 36pcs/Pallet | |
| Container | 20/GP | 40/HQ |
| Number of Container | 216 | 936 |